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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/804,098	03/19/2004	Hiroki Yamamoto	500.43675X00	7093
20457 7590 08/07/2007 ANTONELLI, TERRY, STOUT & KRAUS, LLP 1300 NORTH SEVENTEENTH STREET SUITE 1800 ARLINGTON, VA 22209-3873			EXAMINER VERDERAME, ANNA L	
			ART UNIT 1756	PAPER NUMBER
			MAIL DATE 08/07/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/804,098	Applicant(s) YAMAMOTO ET AL.	
	Examiner Anna L. Verderame	Art Unit 1756	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 June 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 11-20 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 11-18 and 20 is/are rejected.
- 7) ☒ Claim(s) 8 and 19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>03/14/2007</u> . | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

The response provided by the applicant has been read and given careful consideration.

Responses to the arguments and amendments of the applicant are presented after the first rejection to which they are directed.

#### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 5-8 11-14, 16-18, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hara et al. JP 03-091128 in view of Rosen et al. EP 0 910 590, Shintani et al. 2003/0039200 and Sakaue et al. '451.

This rejection can be found in the non-final rejection mailed on 01/09/2007.

3. Claims 1-3, 5-7, 11-14, 16-18, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hara et al. JP 03-091128 in view of Rosen et al. EP 0 910 590, Shintani et al. 2003/0039200 and Sakaue et al. '451 and further in view of Kamiya et al. '690.

This rejection can be found in the non-final action mailed on 01/19/2007.

3. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto et al. 2004/0085882 in view of Rosen et al. EP 0 810 590.

This rejection can be found in the non-final action mailed on 01/19/2007.

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4. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto et al. 2004/0085882 with Rosen et al. EP 0 810 590 in view of Tseng et al. 2004/0085882.

This rejection can be found in the non-final action mailed on 01/19/2007.

5. Claims 1-7 and 11-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto et al. 2004/0085882 with Rosen et al. EP 0 810 590 and Tseng et al. 2004/0085882 in view of Kamiya et al. '690.

This rejection can be found in the non-final action mailed on 01/19/2007.

#### ***Allowable Subject Matter***

6. Claims 8 and 19 are allowed.

#### ***Response to Arguments***

6. The applicants claim that Yamamoto is not utilizable as art under 35 USC 103(c) and complies with the requirements of 35 U.S.C. 103 (a) is incorrect and deficient. Art is utilizable under 103 (a) and must meet the requirements of 103 (c). Applicant has attempted to disqualify reference 2004/0085882 under 35 U.S.C. 103(c) by showing that the invention was owned by, or subject to an obligation of assignment to, the same entity as 2004/0085882 **at the time this invention was made**. However, applicant has failed to provide a statement that the application and the reference were owned by, or

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subject to an obligation of assignment to, the same person **at the time the invention was made** in a conspicuous manner, and therefore, is not disqualified as prior art under 35 U.S.C. 103(a). Applicant must file the required evidence in order to properly disqualify the reference under 35 U.S.C. 103(c). See MPEP § 706.02(I).

In addition, applicant may overcome the applied art either by a showing under 37 CFR 1.132 that the invention disclosed therein was derived from the inventor of this application, and is therefore, not the invention "by another," or by antedating the applied art under 37 CFR 1.131.

The applicant makes no statement that the property was commonly owned **at the time of the invention**. The rejections in which Yamamoto et al. was relied upon stand.

The applicant's argument that Hara et al. does not disclose or teach a thin film having a non-linear and reversible change of its complex refractive index is correct. However, the examiner did not argue that this reference taught this feature. Instead Hara et al. was relied upon for its teaching of a reflecting film of a laminate of high and low refractive index films. The number of alternating high-low refractive index films can be between 2 and 7. Further, Hara et al. teaches the use of this reflecting film with a Te-based phase-change recording layer.

Rosen et al. teaches a multi-layer recording medium having a reflecting film formed of a laminate of alternating high and low refractive index films. Rosen further teaches the replacement of the reflective layer with these reflecting films formed of a laminate of alternating high and low refractive index films.

In regard to the applicant's argument that the art applied does not disclose a thin film having a non-linear a reversible change in its complex refractive index, the examiner points to the disclosure of Shintani et al. Shintani et al teaches a non-linear optical substance whose optical properties change depending on the energy density of the applied light. When light is focused on the layer transmittance is low and reflectivity is high, and when light is not focused on the layer transmittance is high and reflectivity is low (0025). This illustrates the reversible nature of the non-linear optical substance. It is also noted that the non-linear film is placed on the side of the recording opposite the light-incidence plane. This placement is identical to that disclosed by the applicant.

With regard to the applicant's argument that Sakaue et al does not disclose pairs of dielectric layers with a variable refractive index, but rather suggests a recording layer between dielectric layers, the examiner points to the disclosure that the metal reflective layer provided on the side of the recording layer opposite the light incidence plane may be replaced with a dielectric multilayer film with a large reflectivity at a predetermined wavelength(4/22-5/16). In the statement of obviousness, the examiner uses the teachings of Sakaue et al. to justify the replacement of the metal reflective layer with a dielectric multilayer. Replacement of the reflective film with a dielectric multilayer would result in a medium having a dielectric multilayer on the side of the recording layer opposite the light incident plane. This placement is identical to that disclosed by the applicant.

Yamamoto et al. teaches combination of a multilayer dielectric with a light-condensing layer. The structural arrangement is rendered obvious in view of Rosen et al. The reference also teaches the limitations of claims 4 and 15.

### ***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

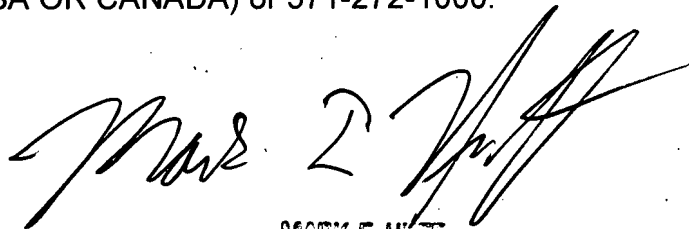
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anna L. Verderame whose telephone number is (571)272-6420. The examiner can normally be reached on M-F 8A-4:30P.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on (571)272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ALV



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